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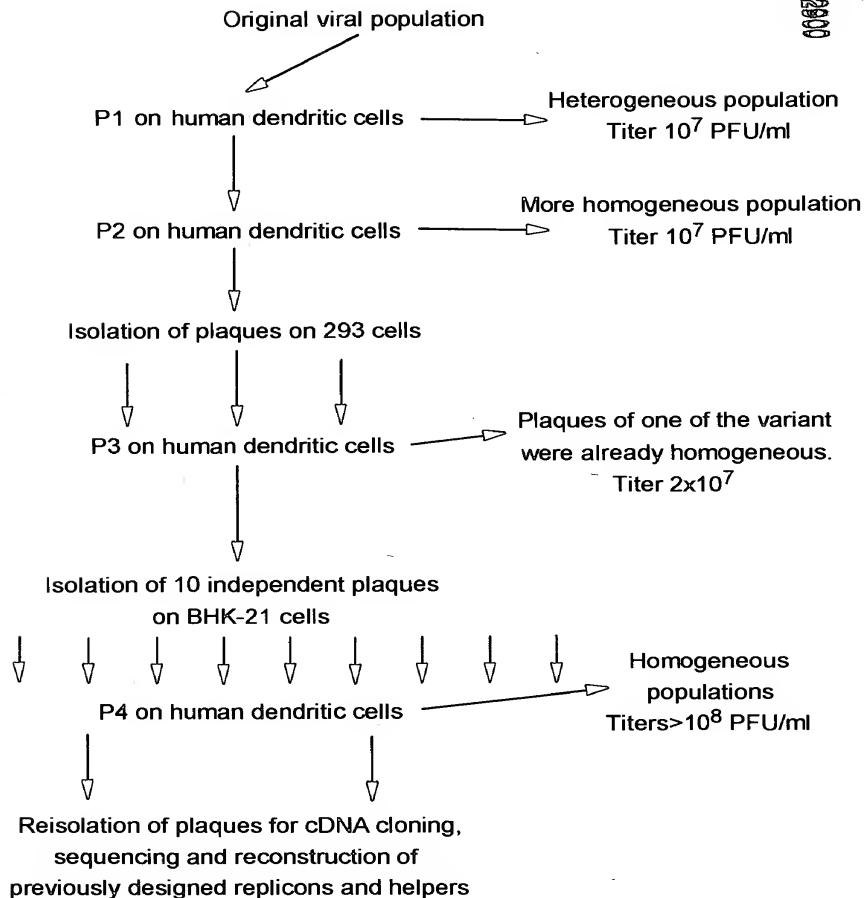
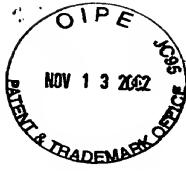


FIG. 1



Polo et al.
COMPOSITIONS AND METHODS FOR
GENERATING AN IMMUNE RESPONSE
UTILIZING ALPHAVIRUS-BASED
VECTOR SYSTEMS
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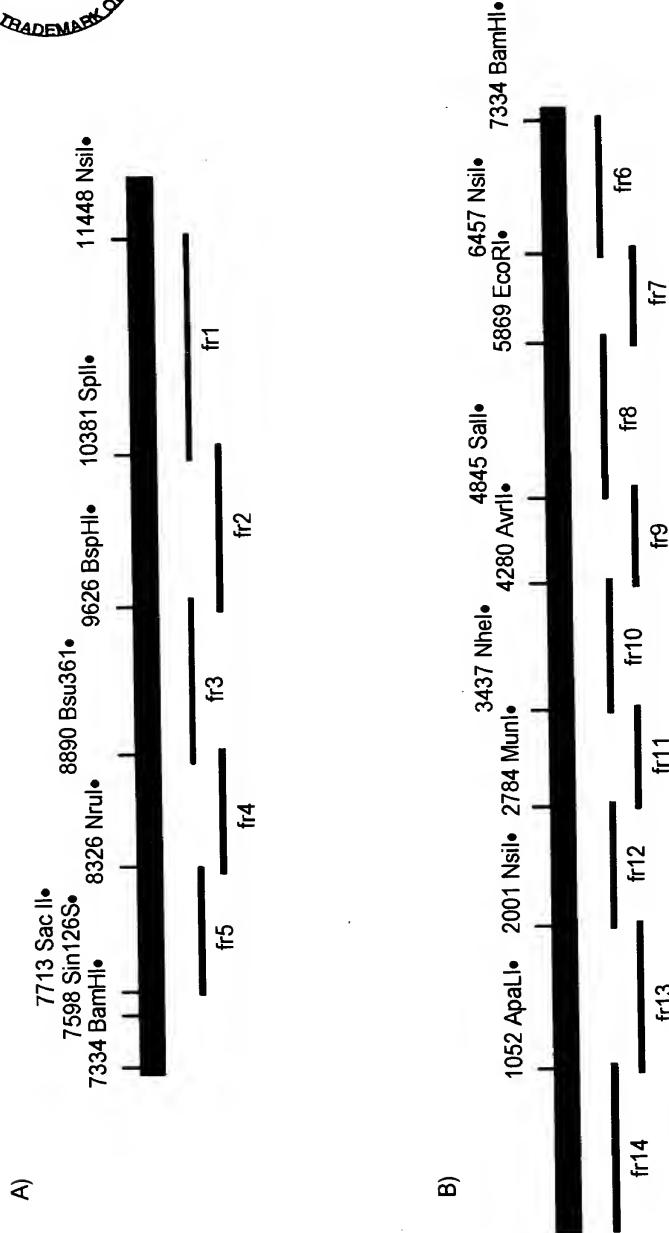


FIG. 2A

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COMPOSITIONS AND METHODS FOR
GENERATING AN IMMUNE RESPONSE
UTILIZING ALPHAVIRUS-BASED
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ACAGTGAGGAGCTAGTCACCGCTTGTGCAAGAAATTGTCAGGGTGTCTGCGAGCGAGACCAAGTGTCTCAA

FIG. 2B-1



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SECAATACAGAAATGTACCTGATTTCCGACAACTAGACAACAGCGGTACCGCAATTCCCCGACCACATCTGA
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GATCATGGATAACTCCGGTcGGTT

FIG. 2C-2



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ttttacat

FIG. 2B-3



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CAAATGACGCTTACGATCGGACAGTATATGCTTGTCTGCCAAACTCTGTCGTGAGGAAATGCCAAACTCGCACCG
CCGACCCGCTAGCAGATCAGGTTAAAGATCATACACACACTCCGGAAGATCAGGAAGGATCGCGTCAACCACATACG
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GCAAGTATGGTACGATCACGCCATTGGCGCCGAACTCTCCCGTAGATTTCCGGTTCTCAGCTAGCTGGAG
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TCATCAACATTGGAACTAAATGAGAACCCACTTCACTGAGTGCAGGAGAACGACATGCGGCACTTAAACCC
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FIG. 2C-1



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FIG. 2B-2



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TCGCGATAGTCTCGGTGGAGCTGATGAAGGAACACGAACACTGCCCTTCGGTCGTACCTGGAATAGTAAAGGGA
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CCAGTTGGATACGACCAAAAGCGGAGCGAAGCGCAAACAGTACCGCTCATGCTGCTTAAGCAGGATCAC
CCGTTAAAGAAGGCACCATGGATGACATCAAGATTAGCACCTCAGGACCGTGTAGAAGGCTTAGCTACAAAGGAT
ACTTTCTCTCGAAAATGCCCCCAGGGACAGCGTAACGTTAGCATAGTGTAGCAACTCAGCAACGTCAT
GTACACTGGCCCGCAAGATAAAACCAAATTCGTTGGGACGGGAAAGATGATCTACCTCCGGTCACTGGTAAAA
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ACGTTATACATCCTACCTGAAAGAATCATCAGGGAAAGTTACGCAAAGGCCCATCTGGGAGAACATTACGT
ATGAGTGAAGTGCAGGCACTACAAGACCAAGCCTTCGACCCGACCCGAAATCACTGGTTGACCGCCATCA
AGCAGTGGCTCGCTATAAGGCGACCAACGAAAGTGGGCTTCACACTGCCGACTTGTGACAGACATGACGACC
ACACGGGCAAGGGAAATTGCTTGGCTTAACTGCAAGTGTGATGCCGAGTACCTGCTATGGTCCCTGTGCCACCGCG
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GACTAGGGGAAACCCGGAACCAACCACTGAATGGATCGTGGAAAGACGGTCAGAAACTTCCAGCTGACCCGAG
ATGGCTGGAAATCATATGGGGAAATCATGGGCACTGGGCTGTATGCCAAGAGTCACTGCCAGGAGACCC
ACGGATGGCCACAGAAATATGAGCATACATGCACTTGTGACCCATCTGGTGTACACCATCTTACCGCTGCATCG
CTACCGTGGGATGATGATGGCTAACCTGTCAGTGTATGTGCTGTAAGCGCGCGTGAGTGCCTGACGC
CATACGCCCTGGCCCAACGCCGTAACTCCAACTTCGCTGCCACTTGTGCTGCTGTTAGTCGGCCAATGCTG
AAACGTCAGGACGACCATCTGAGTACTGTGCTGCAACTGAGCTCAGCGCTTCTGGGTCAGTGTGCTACCTT
TGGCGCTTCTGCTCATGCTTAATGCGCTGCTGCTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG
CGAAGGTGAGCGCTACGAAACATGCCAACACTGTTCCAATGTGCAACAGATACCGTATAAGGCACTTGTGAAA
GGGCAGGGATGCCCGCTCAATTGGAGATCACTGTCATGCTCTGGAGGTTTGCCTTCACCAACCAAGAGT
ACATTACCTGCAAAATTCAACACTGTGTCCTCCCAAACAAATCAATGTCGCGCTCTGGATGTGACCGCG
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GCGACAGTGAACAGCCAGATGAGTGAGCGTACGTGCAACTGTCAGCAGATTGCGCTGACCCACGCGCAGG
CGATTAAGGTGACACTGCCGATGAAAGTAGGACTGCGTATAGTGTACGGAAACACTACCAAGTTCTAGATG
TGTACGTGAGCGACTCACCCAGGAACGCTAAAGACTTGAAGACTCATGCTGACCAATTTCAGCATGCTTAA
GCCATTCTGCTCATAAAGGTGTTATCCATCGCGGCCCTGGTGTACAACACTATGACTCTCCGGAATATGGCGATGA
AACAGGAGCGTTGGAGACATTCAAGCTTCTGCACTGAGGATCTCATGCCAGCACAGACATTAGGC
TACTCAAGCTTCCGCCAAAGACGTGCACTGTCGCTACACGCCGCTACAGGATTTGAGATGTGAAAACA
ACTCAGGCCACTGCAAGGAAACGCCACCTTCCGGCTAAAGATTGCAACTATCGCTCCAGCGGTGACT
GTTCATACGGGAACATTCCCATTTCTATTGACATCCCAACGCTGCTTATCAGGACATCAGATGCAACACTGG
TCTCAACACTCAAATGTGAAGTCAGTGTACTTATTGACAGACTTCCGCGGGATGCCACCTCTGAGTATG
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TCCTGGAGAAAGGAGCGTACAGTACATTAGCAGCGAGTCACAGCCGAACCTTATGCTATCGCTGCTG
GGAAGAAGACAAACATGCAATGCAAGATGAAACCCAGCTGACCATATCGTGGAGCACCCGACAAAAATGACC
AGAATTTCAGCCGCACTCTAAACATCATGGAGTTGGCTGTTGCCCTTCTGGGGCCCTGCGTAT
TAATTATAGGACTTATGATTTGCTGCGCATGATGCTGACTAGCACAGAAGATGACCGTACGCCCAATG
ATCCGACCGACAAACTCGATGTACTCCGAGGAACGTGATGTCATAATGCACTGAGGTGTTAGCTG
gcttaccgcggcaataccatataccatattacccattatctagcgacgcacaaactcaatgtatttcgaggacgc
tgttgccacaataccactatattaaccattatctagcgacgcacaaactcaatgtatttcgaggacgc
gtgcataatgccacgcacgcacgcataactttattatctttaatcaacaaaattttgttttaat

FIG. 2C-3



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Infection of human dendritic cells with a DC adapted alphavirus vector (DC+) expressing GFP

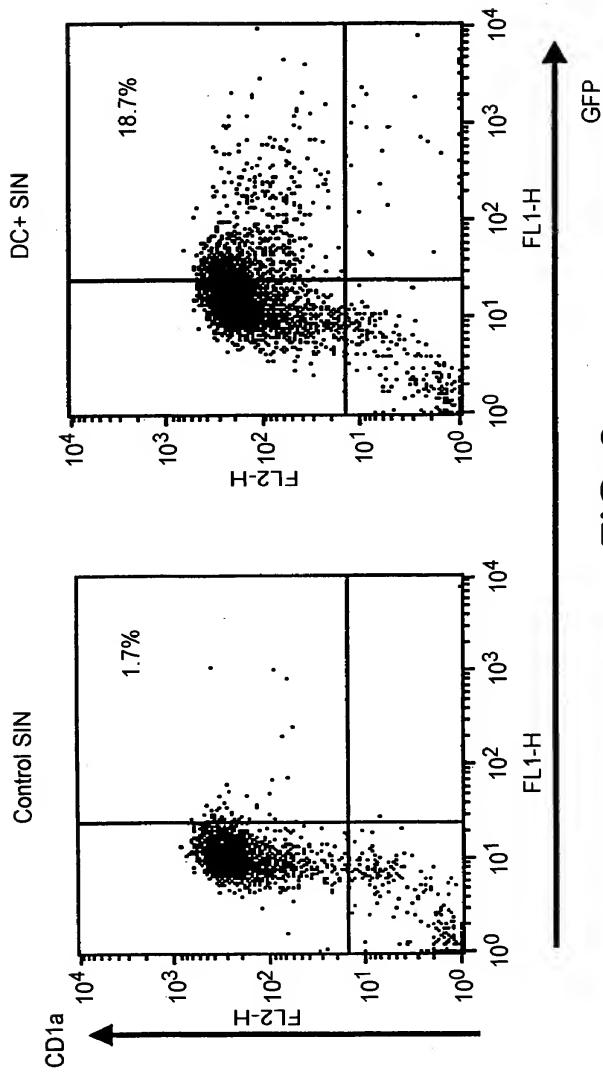


FIG. 3



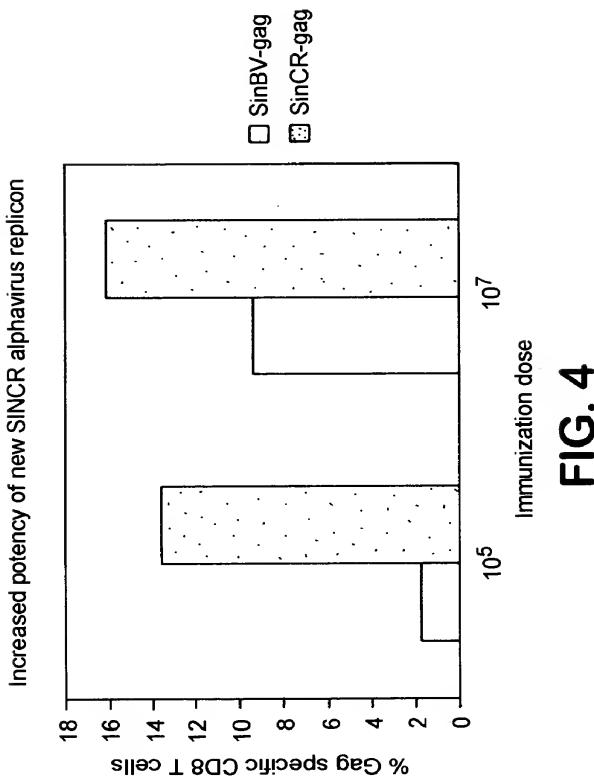
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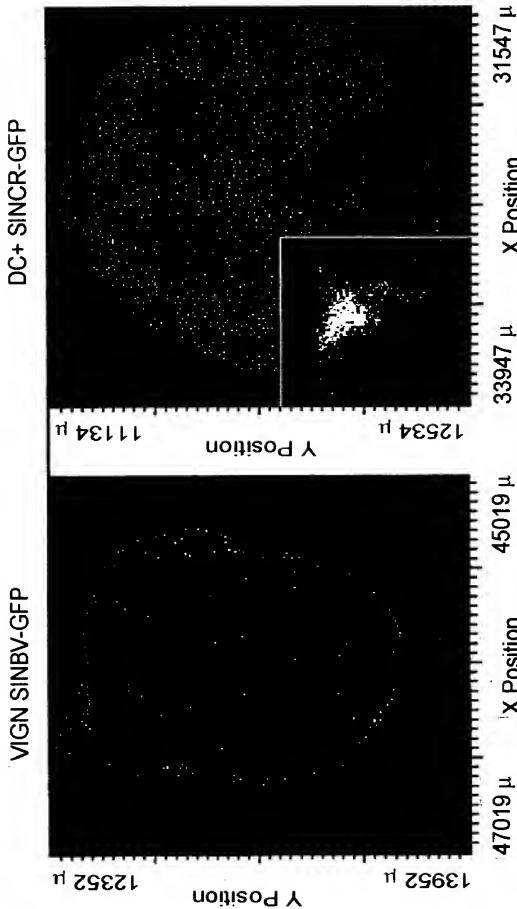


FIG. 6

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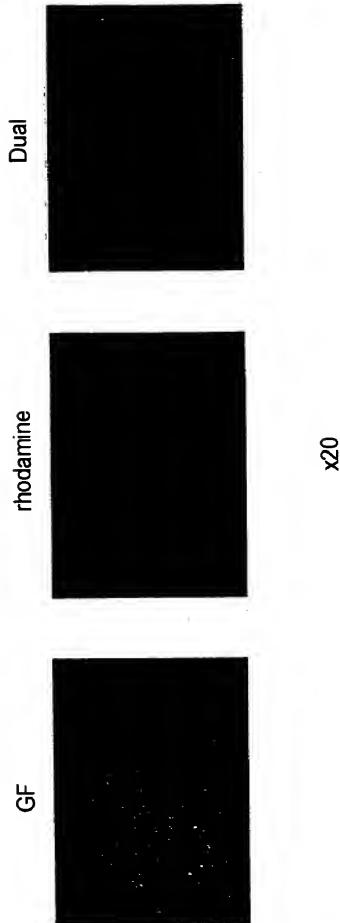
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Trafficking of alphavirus vector transduced DC to the mandibular lymph node



SIN-GFP vector injected intradermally, with rhodamine paint applied to skin

FIG. 7

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Mouse DC transduction is not predictive of the ability
of alphavirus vectors to transduce human DC

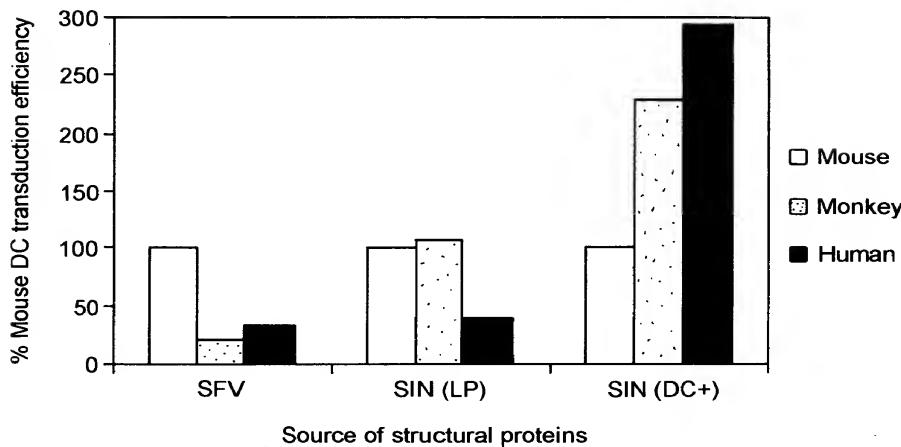


FIG. 8

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Alphavirus vectors can induce DC maturation and activation both *in vitro* and *in vivo*

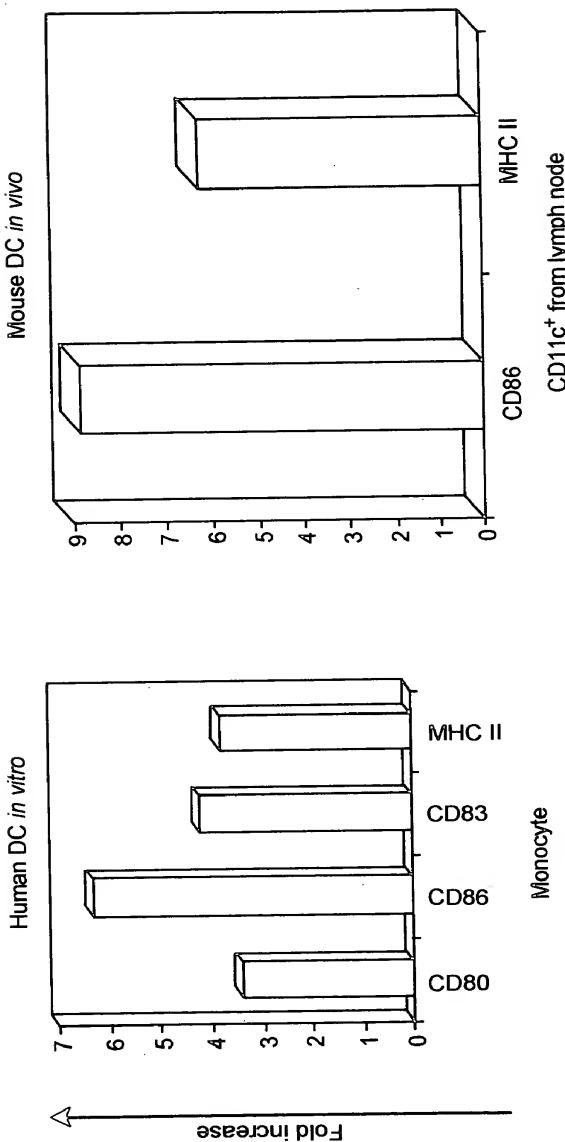


FIG. 9



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Adapted alphavirus vectors can be used to assay antigen presentation and immune stimulation *in vitro*

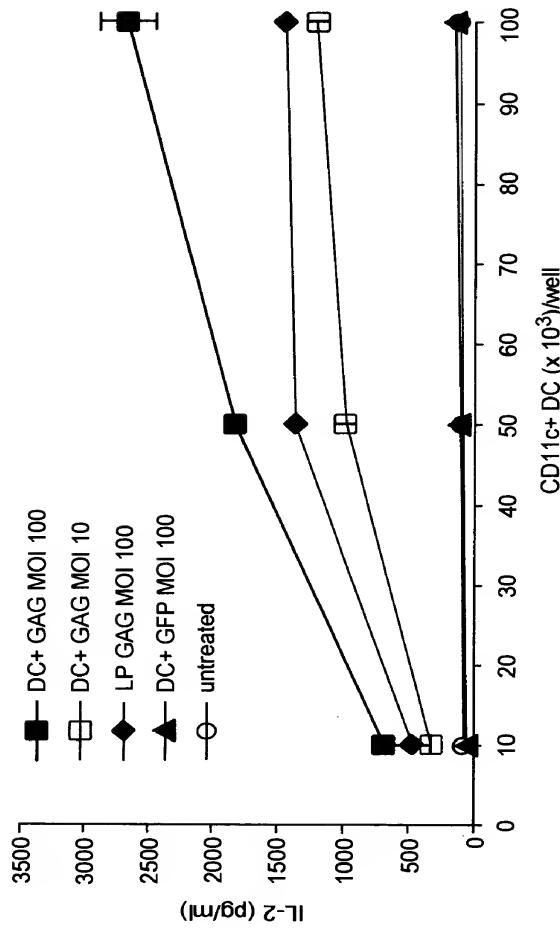


FIG. 10

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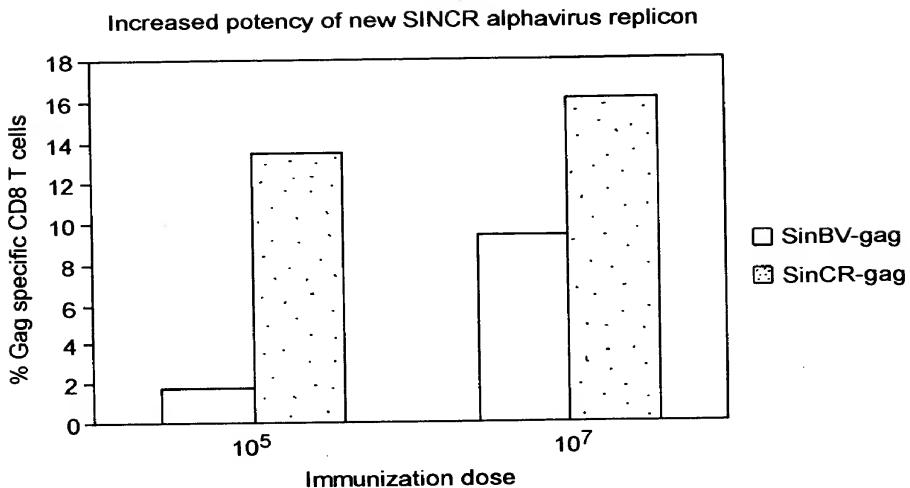


FIG. 11

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Enhanced immune response by using a prime-boost strategy

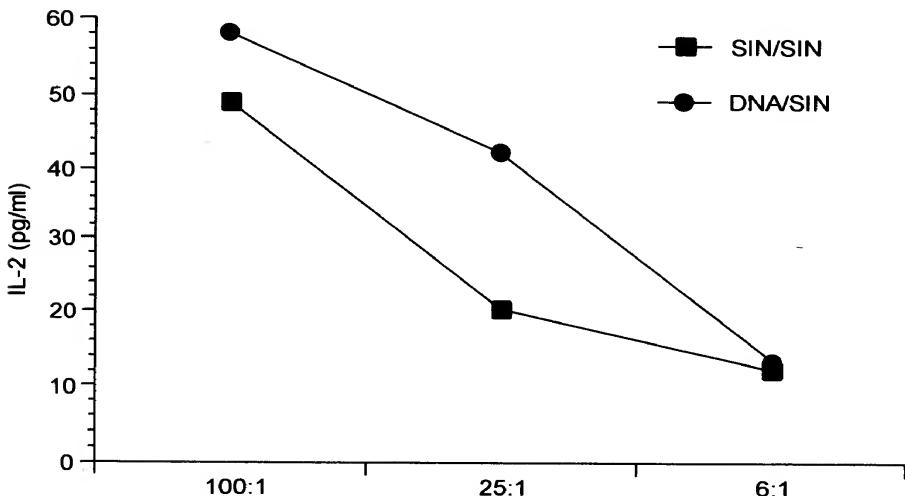


FIG. 12